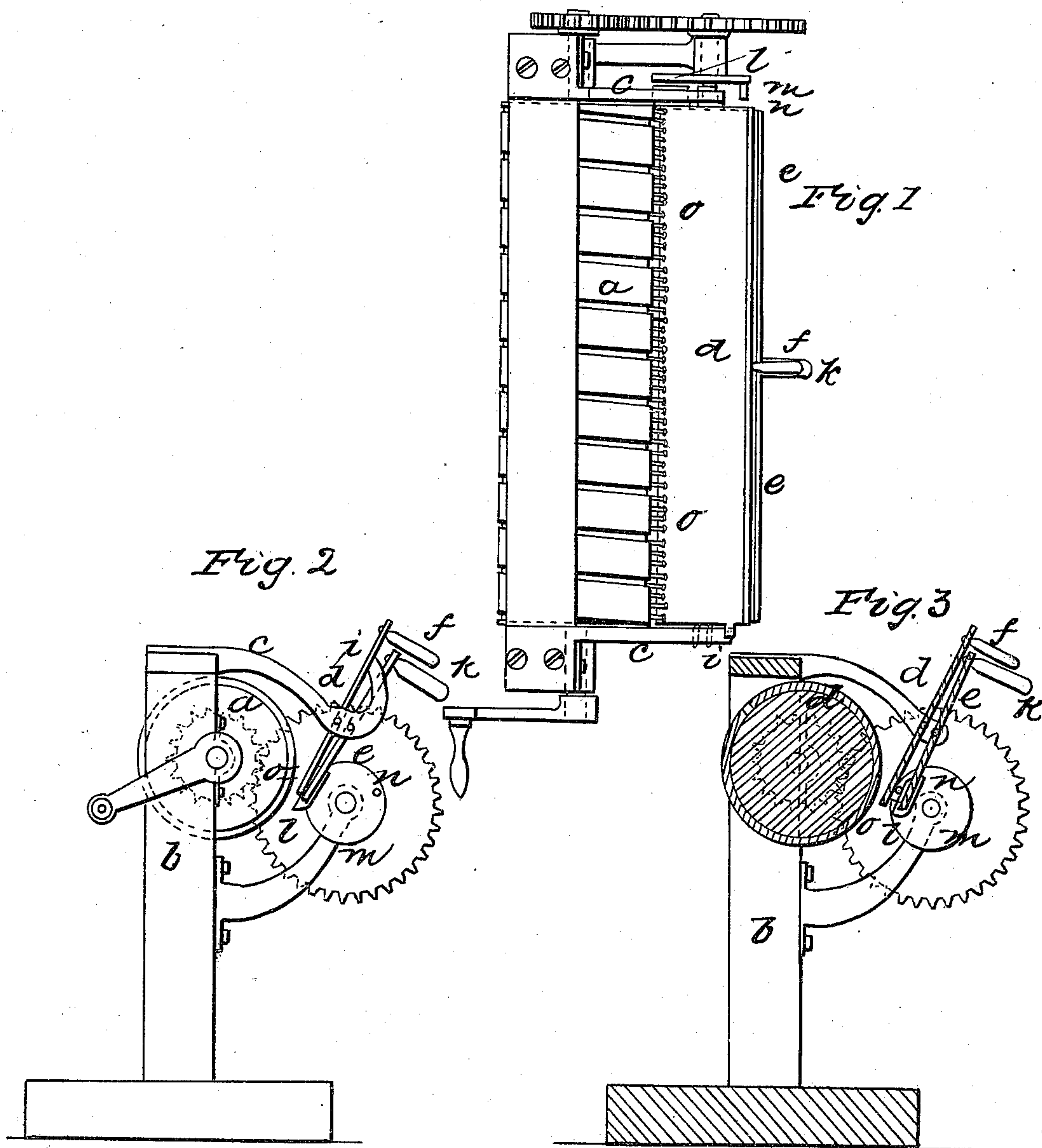



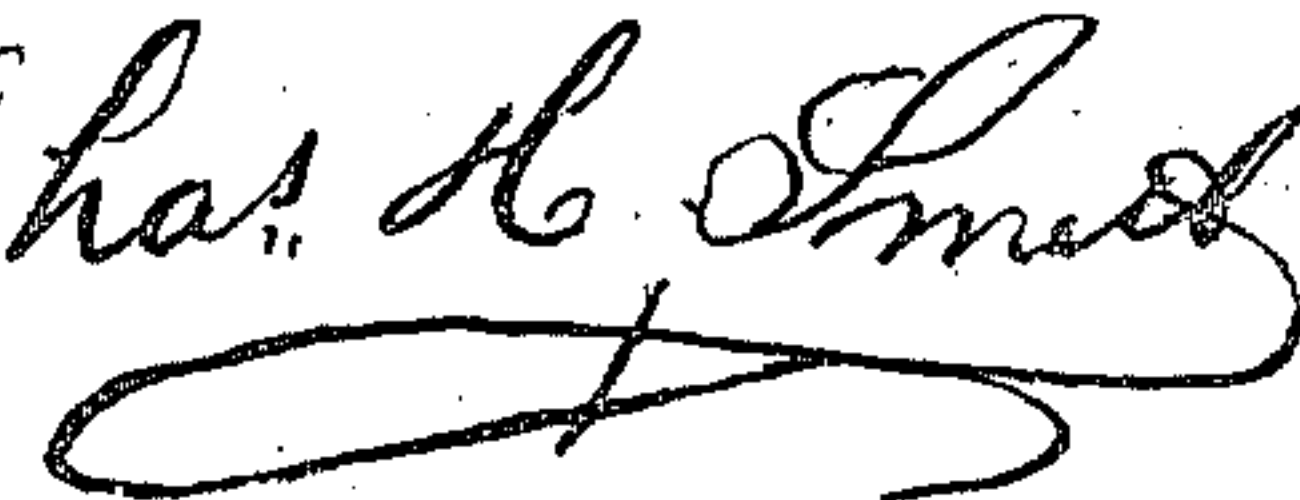
W. H. LIVINGSTON.

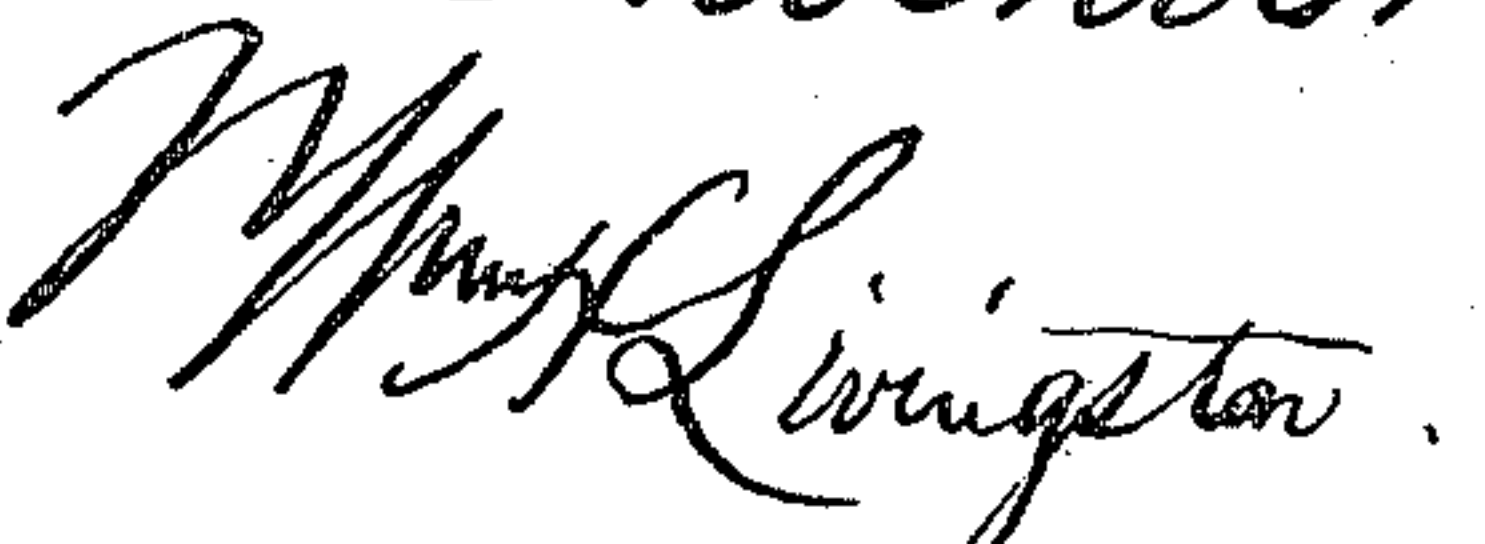
Cotton Gin.

No. 42,206.

Patented April 5, 1864.



Witnesses
Lemuel W. Serrell

Chas. H. Smith


Inventor
Wm. H. Livingston.


UNITED STATES PATENT OFFICE.

WM. H. LIVINGSTON, OF NEW YORK, N. Y.

IMPROVEMENT IN COTTON-GINS.

Specification forming part of Letters Patent No. 42,206, dated April 5, 1864.

To all whom it may concern:

Be it known that I, WILLIAM H. LIVINGSTON, of the city and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Cotton-Gins; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a plan of my said improvement. Fig. 2 is a side elevation, and Fig. 3 is a section, of said gin.

Similar marks of reference denote the same parts.

Cotton-gins have heretofore been constructed in which a roller covered with leather is employed, in connection with an adjustable breast-plate and vibrating stripper, to remove the cotton from the seeds, the same being adapted to the long-staple or sea-island cotton. The cotton has been taken from this leather cylinder by different devices, among which may be named a swinging board that gives way with the weight of cotton, and then comes up against the cylinder to collect the next roll, as before.

The nature of my said invention consists in combining with the ginning-cylinder a detaining-board actuated by automatic mechanism, whereby the said board is moved away from the cylinder at regular intervals to allow the roll of cotton to drop. I also employ a series of projecting teeth, acting through or below the edge of the detaining-board, which teeth gather the cotton and draw back at the time of the roll or mass of cotton being delivered from the detaining board or plate.

In the drawings, *a* is the ginning-roller, set in a frame, *b*, and actuated by suitable power. The ginning operation is performed by the well-known breast-plate and stripper found in this class of roller-gins, and does not require further description or illustration, as my invention only relates to taking the cotton off this leather-covered ginning-roller.

c c are arms or portions of the frame in which the journals of the boards or plates *d* and *e* are received, and *i* is a projection on *d*, taking against the end of one of the arms *c*, to prevent the lower edge of this plate *d* swinging beyond a certain point as it comes up toward the said

roller *a*; and *f* is a weight on *d*, to cause the lower edge of the plate *d* to swing, when otherwise unacted on, toward the roller *a*. The plate or board *e* is provided with a row of pins or teeth, *o*, at its lower edge, passing through holes near the lower edge of the plate *d*; or said pins might be below said lower edge of *d*, contiguous thereto, and this plate *e* is weighted at *k*, to keep the lower edge in contact with the plate or board *d*, so that the row of pins *o* will project through or beyond the lower edge of *d* and their points almost touch the cylinder *a*. At one end of *e* is a cam or projection, *l*, acted on by a pin, *n*, on a wheel, *m*, that is rotated by any suitable connection with the ginning-cylinder. When this pin *n* comes around and takes the projection *l*, it swings the board or plate *e* upon its journals, drawing the row of teeth or pins *o* back, so that their points are below the surface of the plate or board *d*, and hence withdrawn from the cotton that had collected from the ginning-cylinder *a* upon them and against *d*. The further movement of the plate or board *e* causes the board or plate *d* also to move, in consequence of the board *e* near its upper edge taking against the back of *d*. This movement causes the lower edge of *d* to swing away from the cylinder *a* and drop the roll or mass of cotton, and the pin *n* passing off the edge of *p*, the parts assume their former positions.

The lower edge of the board *d* may have teeth projecting down between the teeth of the row of teeth or pins *o* upon *e*, so as to cause the delivery of the cotton from such teeth when they are drawn back with the board *e*.

It will be evident that the board *d* and teeth *o* may be placed at any desired point higher up or lower down on the cylinder, so as to receive the ginned cotton against its lower edge, and the projecting teeth or pins *o* act to detain the cotton, and when drawn back allow the whole or a portion of the accumulated cotton to drop, according to the length of such teeth or pins, even if the board *d* were not employed to remove all the cotton from such teeth or pins.

What I claim, and desire to secure by Letters Patent, is—

1. Actuating the board or plate that receives the ginned cotton from the ginning-cylinder

automatically and positively, in order that it may be drawn or swung away from said cylinder at regular intervals for allowing the accumulated cotton to pass away, as specified.

2. A row of teeth or pins, combined with the ginning-roller, when the said pins are retracted at the time of delivering the cotton, as specified.

In witness whereof I have hereunto set my signature this 9th day of December, A. D. 1863.

WM. H. LIVINGSTON.

Witnesses:

LEMUEL W. SERRELL,
CHAS. H. SMITH.